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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,941	12/29/2004	Masaya Tanaka	0020-5615PUS1	5052
2292 7590 09/02/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
OSTRUP, CLINTON T				
ART UNIT		PAPER NUMBER		
3771				
NOTIFICATION DATE		DELIVERY MODE		
09/02/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/519,941

Applicant(s)

TANAKA, MASAYA

Examiner

CLINTON OSTRUP

Art Unit

3771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. This Office Action is in response to the amendment filed June 15, 2009. As directed by the amendment, claim 1 has been amended. Claims 3, 5 and 7-12 are cancelled. Thus, claims 1, 2, 4 and 6 are pending in this application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2, 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 describes the absorption aid as "(c) a viscous material containing sodium alginate or propylene glycol alginate, sodium carboxymethyl cellulose, and sodium dihydrogen phosphate" and it is unclear if applicant is attempting to claim (sodium alginate) or (propylene glycol alginate, sodium carboxymethyl cellulose, and sodium dihydrogen phosphate) or (sodium alginate or propylene glycol alginate), sodium carboxymethyl cellulose, and sodium dihydrogen phosphate. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishino et al., (JP 07-171189 A) and further in view of Tanaka et al., (WO 99/24043, based on the English Equivalent US 6,689,339).**

Regarding claim 1, Nishino discloses a carbon dioxide external administration device (figure 1) comprising: a sealing enclosure member (1) capable of for sealing a body surface from the outside air; the sealing enclosure member holds carbon dioxide gas within a sealed inside space; a supply means (2) for supplying carbon dioxide into the inside space of the sealing enclosure member; and an absorption aid (water) that is provided in the inside space of the sealing enclosure member, contains a carbon dioxide-dissolving medium (water) for dissolving carbon dioxide gas, and dissolves carbon dioxide gas to assist transdermal or transmucosal absorption of the carbon dioxide. See: [0008-0015] and figure 1.

Regarding claim 1, Nishino discloses a carbon dioxide external administration device (figure 1) comprising: a sealing enclosure member (1) capable of sealing a body surface from outside air; the sealing enclosure member being capable of holding carbon dioxide gas within a sealed inside space; a supply means (2) for supplying carbon dioxide gas into an inside space of the sealing enclosure member; and an absorption aid (water) that is provided in the inside space of the sealing enclosure member, containing a carbon dioxide-dissolving medium (water) for dissolving carbon dioxide gas, and dissolves carbon dioxide gas to assist transdermal or transmucosal absorption of the carbon dioxide. See: [0008-0015] and figure 1.

However, Nishino lacks the absorption aid containing at least one carbon dioxide-dissolving aid containing a carbon dioxide-dissolving medium which comprises (a) 1,3-butylene glycol; (b) jojoba oil; (c) a viscous material containing sodium alginate or propylene glycol alginate, sodium carboxymethyl cellulose, and sodium dihydrogen phosphate; (d) olive oil; (e) avocado butter; (f) a viscous material containing sodium hyaluronate and malic acid; and (g) a viscous material containing carrageenan and pectin.

Tanaka et al teaches a carbon dioxide external administration device with a carbon dioxide absorption aid that contains a carbon dioxide dissolving medium in the form of an emulsion or a cream and said emulsion or cream comprising at least an oil or fat, a surfactant and water. See: Tanaka et al., See: col. 2, lines 36 - col. 9, line 57. Tanaka suggests the use of (a) **1,3-butylene glycol** (col. 10, lines 37-40 and claim 9) ; (b) **jojoba oil** (col. 10, lines 41-57); (c) a viscous material containing **sodium alginate** (throughout disclosure (e.g. col. 2, line 67 and col. 7, lines 43-45)), examples (e.g. examples 1-79, 81-82, 85-99, 102, 104-105, 107, 109-140, 142, 145-175, 177, 180-196, 199-201, 204-208, 216-219, 226-242, 248-265, 271-287, 293-299) and claims (e.g. claims 1, 3, and 9) or **propylene glycol alginate** (col. 2, line 67 - col. 3, line 1 and col. 7, lines 43-45), **sodium carboxymethyl cellulose** (throughout examples and claim 9), and **sodium dihydrogen phosphate** (col. 3, line 30 and col. 9, lines 6-12) ; (d) **olive oil** (col. 10, line 42); (e) **avocado butter** (avocado oil at col. 10, line 42); (f) a viscous material containing **sodium hyaluronate** (col. 3, lines 1-2; col. 7, lines 48-49 & col. 10, line 38) and malic acid (col. 3, line 25 and col. 9, line 2); and (g) a viscous material

containing **carrageenan** (col. 2, line 50 and col. 7, line 18) and **pectin** (col. 2, line 52 and col. 7, line 19). See: col. 7, lines 43-46, Tables 1-25 and claims 1, 3, and 9.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the absorption aid (water) of Nishino, by using an aqueous viscous gel composition as taught by Tanaka with alcohols having high vaporization temperatures and oils and fats in order to provide an absorption aid comprising the specific ingredients suggested by Tanaka, that would provide "improved skin comfort, usability, and the like of the composition by adding a perfume, color material, moisturizer, oily component..." See: Tanaka col. 9, lines 13-50

Regarding claim 4, Tanaka teaches incorporating carbon dioxide containing viscous compositions into a sheet for topically applying carbon dioxide gas to skin. See: col. 3, line 65 - col. 4, line 3; col. 12, lines 4-33; col. 43, lines 38 - col. 44, line 58.

Regarding claim 6, Nishino discloses a carbon dioxide external administration device with a sealing enclosure member (1 or 11) that is made from a flexible material having a shape holding ability (when inflated), an elastic and flexible material (it expands and contracts as it is inflated) formed into a shower cap or a boot.

6. **Claim 2 and is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishino et al., (JP 07-171189 A) in view of Tanaka et al., (WO 99/24043, based on the English Equivalent US 6,689,339) and further in view of Westwood (WO 98/173340).**

The combined references disclose all the limitations of claim 2, except the carbon dioxide amount indicator being provided separately from the sealing enclosure member.

Westwood teaches a sealing enclosure member (10) with a valve (18) that would expand (open) when carbon dioxide is supplied into the sealing enclosure member (at least at a given pressure) and contracts (closes) when the amount of carbon dioxide decreases (when the pressure falls below the given pressure). See: figures 1-6.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have added a valve, as taught by Westwood, to the boot device disclosed by the combined references, in order to determine when the optimal amount of carbon dioxide pressure is being applied to the user.

Response to Arguments

7. Applicant's arguments with respect to claim 1, 2, 4 and 6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLINTON OSTRUP whose telephone number is (571)272-5559. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Clinton Ostrup/
Examiner, Art Unit 3771

/Justine R Yu/
Supervisory Patent Examiner, Art Unit 3771